

## CLAIMS:

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1. Inductive-system (1,2) comprising - a first part in the form of a printed coil (11,21) comprising a number of turns defined by at least one track width and at least one turn spacing; and - a second part in the form of a non-printed coil (12,22); which printed coil (11,21) and which non-printed coil (12,22) are coupled serially.

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2. Inductive-system (1,2) as defined in claim 1, wherein the non-printed coil (12,22) comprises an air coil comprising a further number of turns defined by at least one wire diameter and at least one coil diameter (D).

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3. Inductive-system (1,2) as defined in claim 2, wherein a total inductance of the inductive-system (1,2) is substantially equal to an inductance of the printed coil (11,21) plus an inductance of the air coil plus a mutual inductance.

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4. Inductive-system (1,2) as defined in claim 3, wherein a value of the mutual inductance has been chosen by combining a right turn air coil or a left turn air coil with a clockwise printed coil or an anti-clockwise printed coil and by selecting a length (L) of the air coil, with the mutual inductance increasing with the length (L) of the air coil until a maximum overlapping area (50,51,52) between the printed coil (11,21) and the air coil has been reached.

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5. Inductive-system (1,2) as defined in claim 2, wherein the number of turns are further defined by a diameter of a center path ( $R_1$ ) and a turning direction, with the further number of turns being further defined by a turning orientation.

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6. Inductive-system (1) as defined in claim 1, wherein one end of the non-printed coil (12) is coupled to a center end of the printed coil (11), with the other end of

the non-printed coil (12) and an outer end of the printed coil (11) constituting ends of the inductive-system (1).

7. Inductive-system (1,2) as defined in claim 1, wherein the printed coil  
5 (11,21) is printed on an inner or an outer layer of a printed circuit board (13,23).

8. Printed circuit board (13,23) which comprises an inductive-system (1,2)  
comprising - a first part in the form of a printed coil (11,21) comprising a number of  
turns defined by at least one track width and at least one turn spacing; and - a second  
10 part in the form of a non-printed coil (12,22); which printed coil (11,21) and which non-  
printed coil (12,22) are coupled serially, and which printed coil (11,21) is printed on an  
inner or outer layer of the printed circuit board (13,23).

9. Tuner (3) which comprises a filter (32) with an inductive-system (1,2)  
15 comprising - a first part in the form of a printed coil (11,21) comprising a number of  
turns defined by at least one track width and at least one turn spacing; and - a second  
part in the form of a non-printed coil (12,22); which printed coil (11,21) and which non-  
printed coil (12,22) are coupled serially.

20 10. Method for producing an inductive-system (1,2) and comprising the  
steps of - producing a first part in the form of a printed coil (11,21) comprising a  
number of turns defined by at least one track width and at least one turn spacing; -  
producing a second part in the form of a non-printed coil (12,22); and - coupling the  
printed coil (11,21) and the non-printed coil (12,22) serially.